DIST.	LTR	ENC
ALLHOFF, F.H.		
BRETZKE, J.C.		
BURLINGAME, A.H.		
CROUCHER, D.W.		
DAVIS, J.G.		
EVERED, J.E.	X	X
FERRERA, D.W.		
FERRERA, K.P.		
FERRIS, L.R.		
FRAIKOR, F.J.		
FRANCIS, G.E.		
GOODWIN, R.		
HEALY, T.J.		
IDEKER, E.H.		
JENS, J. P.		
KERSH, J.M.	X	X
KIRBY, W.A.		
KIRKEBO, J. A.		
LEE, E.M.		
MAJESTIC, J.R.		
McDANIEL, M.G.		
MEURRENS, B.E.		
MONTROSS, R.W.		
MORGAN, R.V.		
NORTH, P.		
PALMER, L.A.		
PARNELL, R.F.		
PIZZUTO, V.M.		
POTTER, G.L.		
RHOADES, J.L.		
SAFFELL, B.F.		
SHANNON, W.M.		
SWANSON, E.R.		
WIEBE, J.S.		
WILKINSON, R.B.		
WILSON, J.M.		
YOUNG, E.R.		
ZANE, J.C.		
E. Hobbs	X	X
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CORRES. CONTROL	X	X
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JAN 02 1991

WMED:JR:10855

Capability to Analyze Plutonium and Americium at Levels Corresponding to Proposed New Stream Standards.

J. M. Kersh, Associate General Manager
Environmental Restoration & Waste Management
EG&G Rocky Flats, Inc.

We have recently been informed that the Colorado Department of Health (CDH) intends to promulgate new Statewide stream standards for plutonium and other radionuclides. Our preliminary information indicates that CDH will promulgate these standards to correspond to a 1:1,000,000 excess lifetime cancer risk level. For plutonium, we have reason to believe that CDH will propose a stream standard of 0.009 picoCuries per liter (pCi/l). We anticipate that these standards will be formally proposed around the end of December 1990, for consideration by the Colorado Water Quality Control Commission in the summer of 1991.

Obviously, the promulgation of a stream standard for plutonium of 0.009 pCi/l will have widespread effects upon our water quality management program. One particular concern of ours is whether Rocky Flats has, or can obtain, the capability to analyze its water at levels sufficiently low to be able to conclusively determine compliance with the proposed new standard. It is our understanding that our current surface water analytical techniques do not provide sufficient resolution to conclusively determine compliance at a level of 0.009 pCi/l.

For plutonium, we believe preliminarily that a laboratory methodology capable of detecting and reliably quantifying plutonium at a level of 0.003 pCi/l will be necessary to meet our needs. We wish to establish and maintain an analytical capability to quantify plutonium at a level well below the proposed standard in order to allow for averaging of plutonium values over time to determine compliance, should CDH choose to measure compliance in such a manner.

In this regard, we request that your staff provide us with the following information:

1. Do the laboratories currently used at Rocky Flats for the analysis of surface water have the ability to achieve the detection/quantification limit specified above? If so, how will the new detection limit affect the number of samples that the laboratory will be able to process? How will laboratory turnaround times be affected? If on-site laboratories do not currently have the capability to reach the detection/quantification limits specified above, what types of improvements would be needed to acquire such a capability?

2. It is our understanding that analytical techniques capable of providing these levels of quantification and detection are currently available through Los Alamos National Laboratories and that these laboratories have been used by Rocky Flats in conducting treatability studies on its terminal ponds. We would like your staff to investigate, on a preliminary basis, the feasibility of using LANL to generate the data needed to determine compliance with the proposed plutonium standard. Specifically, we would like to know the cost of the LANL analyses, their laboratory capacity in terms of the number of samples they believe that they can run in a year, and the turnaround time that would be encountered by sending samples to LANL for plutonium analysis.

Any further information that your staff could provide on the impacts of a reduced plutonium standard on our ongoing water quality data collection efforts would be very much appreciated.

We would like to provide CDH and other interested parties with our assessment of these effects as soon as possible, and request that your staff provide us with this information by January 14, 1991.

If there are any questions, please feel free to contact me or have your staff contact Tom Lukow of my staff at extension 4561.

David P. Simonson
Assistant Manager
for Environmental Management

cc:
T. Lukow, DOE
J. Rampe, DOE